

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
31 December 2003 (31.12.2003)

PCT

(10) International Publication Number
WO 2004/000893 A1

(51) International Patent Classification⁷: **C08F 10/00**,
4/656

(74) Agent: MOMSEN, LEONARDOS & CIA.; Mr. Gus-
tavo José F. Barbosa, Rua Teófilo Otoni 63, 10th floor,
20090-080 Rio de Janeiro RJ (BR).

(21) International Application Number:
PCT/BR2002/000086

(22) International Filing Date: 19 June 2002 (19.06.2002)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **OPP
QUÍMICA S.A.** [BR/BR]; Rua Eteno, 1582, 42800-000
Camaçari, BA (BR).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR,
GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: SOLID CATALYST COMPONENT FOR POLYMERIZATION AND COPOLYMERIZATION OF ETHYLENE, AND,
PROCESS FOR OBTAINING THE SAME

(57) **Abstract:** The present invention relates to process for obtaining a solid catalyst component for ethylene polymerization and copolymerization, wherein a carrier of particulate silica (65 to 85 % by weight) is impregnated with a catalytically active portion (15 to 35 % by weight) including titanium, magnesium, chlorine, alkoxy groups and at least one organometallic compound of the groups 1, 2, 12 or 13 of the periodic table. Further, the invention refers to the solid catalyst component thus obtained and to a process for ethylene polymerization and copolymerization wherein is used said catalyst. The catalyst obtained is suitable for the production of ethylene homo- and copolymers as narrow molecular weight distribution high density polyethylene (NMWHDPE) and linear low density polyethylene (LLDPE) with controlled morphology and improved structure.



WO 2004/000893 A1